

Penley Corporation)	Departmental
Oxford County)	Findings of Fact and Order
West Paris, Maine)	Air Emission License
A-313-71-F-R)	

After review of the air emission license renewal application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Penley Corporation has applied to renew their air emission license. Clothespins are manufactured at the facility located in West Paris, Maine. This license includes two wood fired boilers and various wood milling and conveying equipment.

B. Emission Equipment

This license addresses the following air emission units:

Boilers					
<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Fuel Type, %Sulfur</u>	<u>Max. Firing Rate</u>	<u>Post Combustion Control</u>	<u>Stack #</u>
Boiler 1	6.2	Wood	1378 lb/hr	ChipTek*	1
Boiler 2	6.2	Wood	1378 lb/hr	None	1

* ChipTek is a wood gasification system.

C. Application Classification

The application for Penley Corp. does not include the installation of new or modified equipment. The application has been processed through Chapter 115 of the Department's regulations as a minor source renewal.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

Process Description

Penley Corp. manufactures clothespins. The facility includes a sawmill, planer equipment, steam dryers, assembly and packaging areas, the fuel storage area and the two boilers. The logs come to the facility and enter the sawmill. The wood is sawed into boards and the boards are cut further and planed into clothespin shapes. The shaped wood pieces go through steam dryers and a waxer, then they are assembled with wire springs and packaged for shipping. Novelty clothespins are also made using the same general process, but the novelty clothespins do not have springs and are dried separately in tumble dryers.

Some of the wood waste from the sawmill operations, including chipped bark, is transported to the fuel storage area. The fuel storage area is a three sided roofed structure. Chips with no bark are piled separately and are trucked away to be used by other facilities. The blower in the chipper room conveys the wood waste to the fuel storage area. The process wood waste from the additional sawing and planing operations is conveyed directly to the boiler room. If fuel is not immediately needed for the boilers, the excess is conveyed to the fuel storage area. The wood waste transfer system also includes various process cyclones.

B. Boilers

1. **Boiler #1**

Boiler #1 is a wood fired Dillon fire tube boiler with a maximum firing capacity of 6.2 MMBtu/hr. The boiler exhausts through a common stack with Boiler #2. The boiler provides space heat and steam for the dryers. Boiler #1 shall be limited to 5000 tons/year of wood on a 12 month rolling total basis. Therefore Boiler #1 is not subject to EPA New Source Performance Standards (NSPS) Subpart Dc for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

Boiler #1 has an automated combustion system. The wood gasification system fires green fuel (approx. 30% moisture). Sawdust fuel enters a hot refractory lined chamber where the volatile pyrolysis gas is released into an oxygen deprived environment. Once released, these gases then travel through the burner nozzle where they are superheated and mixed with air for complete combustion leaving little or no waste such as ash, creosote, or stack effluent. The gasifier responds quickly to boiler demand, but also idles efficiently for economical operation.

Penley Corp. shall meet the following BPT emission limits for Boiler #1:

1. MEDEP Chapter 103 contains an applicable PM emission limit. However, the BPT limit of 0.3 lb PM/MMBtu is more stringent and shall be used.
2. Emission factors for SO₂, NO_x, CO, and VOC are based on AP-42 data (2003) and are outlined below.

SO₂ - wood combustion – 0.025 lb SO₂/MMBtu

NO_x - wood combustion – 0.22 lb NO_x/MMBtu

CO - wood combustion – 0.60 lb CO/MMBtu

VOC - wood combustion – 0.017 lb VOC/MMBtu

2. **Boiler #2**

Boiler #2 is a Dillon boiler rated at 6.2 MMBtu/hr and fires wood and is not subject to 40 CFR, Part 60, Subpart Dc. Boiler #2 vents through the common stack. This boiler is used as back-up and is hand fired when operating. Boiler #2 shall be limited to 3000 tons/year of wood on a 12 month rolling total basis.

Boiler 2 shall meet the following BPT emission limits:

1. MEDEP Chapter 103 contains an applicable PM limit of 0.68 lb PM/MMBtu
2. Emission factors for SO₂, NO_x, CO, and VOC are based on AP-42 data (2003) and are outlined below.
 - SO₂ - wood combustion – 0.025 lb SO₂/MMBtu
 - NO_x - wood combustion – 0.22 lb NO_x/MMBtu
 - CO - wood combustion – 0.60 lb CO/MMBtu
 - VOC - wood combustion – 0.017 lb VOC/MMBtu

Visible Emissions from the common stack for Boilers #1 and #2 shall not exceed 30% on a six (6) minute block average, except for no more than three (3), six (6) minute block averages in a three hour period.

C. Stock Piles and Roadways

Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.

D. General Process Sources

Visible emissions from any general process source (including conveyor belts) shall not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

E. Facility Emissions and Fuel Caps

Total facility emissions from Penley Corp. were calculated based on a limit of Boiler #1 firing 5000 tons wood/year and Boiler #2 firing 3000 tons wood/year, based on a 12 month rolling total. Facility emissions shall not exceed the following, based on a 12 month rolling total:

Total Licensed Annual Emissions for the Facility

(used to calculate the annual license fee)

<u>Pollutant</u>	<u>TPY</u>
PM	22.3
PM ₁₀	22.3
SO ₂	1.26
NO _x	13.79
CO	30.24
VOC	0.86

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, a minor source shall submit an air quality impact analysis if emissions are at or above the following:

<u>Pollutant</u>	<u>Threshold (tpy)</u>
PM ₁₀	25
SO ₂	50
NO _x	100
CO	50

Based on the licensed allowed limits, an air quality impact analysis for Penley Corp. is not required at this time.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants air emission license A-313-71-F-R, subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The

- Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]
 - (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [MEDEP Chapter 115]
 - (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]
 - (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]
 - (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]
 - (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]
 - (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]
 - (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. pursuant to any other requirement of this license to perform stack testing.
- B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
- C. submit a written report to the Department within thirty (30) days from date of test completion.

[MEDEP Chapter 115]

- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
 - A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[MEDEP Chapter 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]

- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [MEDEP Chapter 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

SPECIFIC CONDITIONS

- (16) **Boiler #1** [MEDEP Chapter 115, BPT]
- A. Boiler #1 (wood-fired) shall be operated with a heat input capacity not to exceed 6.2 MMBtu/hr.
- B. Emissions from boiler #1 shall not exceed the following:
- | | <u>PM</u> | <u>PM₁₀</u> | <u>SO₂</u> | <u>NO_x</u> | <u>CO</u> | <u>VOC</u> |
|----------|-----------|------------------------|-----------------------|-----------------------|-----------|------------|
| lb/MMBtu | 0.30 | -- | -- | -- | -- | -- |
| lb/hr | 1.86 | 1.86 | 0.16 | 1.36 | 3.72 | 0.11 |
- C. Boiler #1 shall be limited to 5000 ton wood/year, based on a 12 month rolling total. A fuel log shall be maintained documenting monthly fuel use, including fuel use calculations, and the 12 month rolling total.
- (17) **Boiler #2** [MEDEP Chapter 115, BPT]
- A. Boiler #2 (wood fired) shall be operated with a heat input capacity not to exceed 6.2 MMBtu/hr.
- B. Emissions from Boiler 2 shall not exceed the following:
- | | <u>PM</u> | <u>PM₁₀</u> | <u>SO₂</u> | <u>NO_x</u> | <u>CO</u> | <u>VOC</u> |
|----------|-----------|------------------------|-----------------------|-----------------------|-----------|------------|
| lb/MMBtu | 0.68 | -- | -- | -- | -- | -- |
| lb/hr | 4.22 | 4.22 | 0.16 | 1.36 | 3.72 | 0.11 |
- C. Boiler 2 shall be limited to 3000 tons wood/year, based on a 12 month rolling total. A fuel log shall be maintained documenting monthly fuel use, including fuel use calculations, and the 12 month rolling total.

Penley Corporation
Oxford County
West Paris, Maine
A-313-71-F-R

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**Departmental
Findings of Fact and Order
Air Emission License**

- (18) Visible Emissions from the common stack for Boilers #1 and #2 shall not exceed 30% on a six (6) minute block average, except for no more than three (3), six (6) minute block averages in a three hour period. [MEDEP Chapter 101]
- (19) **Stockpiles and Roadways**
Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [MEDEP Chapter 101]
- (20) **General Process Sources**
Visible emissions from any general process source (including conveyor belts) shall not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [MEDEP Chapter 101 and Chapter 115, BPT]
- (21) Penley shall pay the annual air emission license fee within 30 days of **June 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3. [38 MRSA §341-D]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this order shall be for five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/3/2004

Date of application acceptance: 3/16/2004

Date filed with Board of Environmental Protection: _____

This order prepared by Jonathan Voisine, Bureau of Air Quality.